

1. A method to mitigate an allergic response in a patient comprising administering to the patient a pharmaceutically acceptable formulation of a composition comprising an inhibitor of at least one of resistin-like molecule  $\alpha$  (RELM $\alpha$ ), resistin-like molecule  $\beta$  (RELM $\beta$ ), RELM $\alpha$  receptor binding, or RELM $\beta$  receptor binding, in an amount sufficient to inhibit RELM $\alpha$  or RELM $\beta$  and thereby mitigate the allergic response.
2. The method of claim 1 wherein the composition is administered to at least one of an airway, lung, trachea, respiratory tract, or bronchoalveolar space.
3. The method of claim 1 wherein administration is by a route selected from the group consisting of intravenously, intranasally, intratracheally, subcutaneously, intramuscularly, orally, intraperitoneally, and combinations thereof.
4. The method of claim 1 wherein the inhibitor down-regulates expression of at least one of RELM $\alpha$  and RELM $\beta$ .
5. The method of claim 1 wherein the inhibitor is selected from at least one of IL-4 and IL-13.
6. The method of claim 1 wherein the composition further regulates at least one of insulin resistance or obesity.

7. A pharmaceutical composition comprising an inhibitor of at least one of resistin-like molecule  $\alpha$  (RELM $\alpha$ ) expression or resistin-like molecule  $\beta$  (RELM $\beta$ ) expression in a pharmaceutically acceptable formulation sufficient to inhibit at least one of an amount of DNA encoding RELM $\alpha$ , DNA encoding
- 5 RELM $\beta$ , mRNA encoding RELM $\alpha$ , mRNA encoding RELM $\beta$ , RELM $\alpha$  protein or RELM $\beta$  protein.
8. The composition of claim 7 comprising an inhibitor of STAT6, an inhibitor of a Th2 cytokine, or combinations thereof.
9. The composition of claim 7 comprising an inhibitor selected from at least one of a small molecule inhibitor, an oligonucleotide-inhibitor, a transcriptional inhibitor, a translational inhibitor, and combinations thereof.
10. The composition of claim 7 in a formulation for administration to at least one of an airway, lung, trachea, respiratory tract, or bronchoalveolar space in an asthmatic patient.

11. A physiological assessment method comprising determining a level of at least one of resistin-like molecule  $\alpha$  (RELM $\alpha$ ) or resistin-like molecule  $\beta$  (RELM $\beta$ ) in a patient to assess a patient parameter selected from the group consisting of clinical status, phenotype, genotype, drug response, prognosis, single nucleotide polymorphisms, and combinations thereof.
12. The method of claim 11 wherein RELM $\alpha$  or RELM $\beta$  is determined in at least one of lung fluid, lung biopsy, sputum, mucus, nasal washings, bronchoalveolar fluid, respiratory tract tissue, respiratory tract fluid, blood, and combinations thereof.
13. The method of claim 11 wherein at least one of RELM $\alpha$  DNA, RELM $\beta$  DNA, RELM $\alpha$  mRNA, RELM $\beta$  mRNA, RELM $\alpha$  protein, or RELM $\beta$  protein is determined.
14. The method of claim 11 wherein an increased level of at least one of RELM $\alpha$  or RELM $\beta$  indicates an inflammatory process.
15. The method of claim 11 wherein at least one of RELM $\alpha$  or RELM $\beta$  is determined qualitatively, quantitatively, or functionally.

16. A method to mitigate lung disease in a patient comprising providing an inhibitor to at least one of a resistin-like molecule  $\alpha$  (RELM $\alpha$ ) or resistin-like molecule  $\beta$  (RELM $\beta$ ) in a pharmaceutically acceptable composition to a lung of a patient to thereby mitigate lung disease.
17. The method of claim 16 wherein the mitigation comprises reducing at least one of lung leukocyte accumulation, mucus production, cell proliferation, collagen deposition, macrophage accumulation, and fibroblast accumulation.
18. The method of claim 16 further comprising inhibiting expression of at least one of RELM $\alpha$  and RELM $\beta$  in an airway, lung, trachea, respiratory tract, or bronchoalveolar lavage fluid.
19. The method of claim 16 wherein the patient is asthmatic
20. The method of claim 16 wherein the patient has lung fibrosis.
21. The method of claim 16 wherein a pharmaceutical composition of a regulatory compound is administered to the lung in an amount sufficient to down regulate RELM.

22. The method of claim 21 wherein the composition is administered by a route selected from the group consisting of intranasal, intratracheal, aerosol, inhalation, subcutaneously, intramuscularly, orally, intraperitoneally, and combinations thereof.

23. The method of claim 16 wherein the regulation reduces expression of RELM to mitigate lung disease.

24. The method of claim 16 wherein at least one of lung fibrosis, lung inflammation, asthma, lung congestion, lung scarring, and inflammatory cell recruitment is mitigated.

25. The method of claim 24 wherein mitigation of inflammatory cell recruitment is at least one of fibroblasts, macrophages, lymphocytes, neutrophils, and eosinophils

26. A method to enhance repair of allergy-induced inflamed lung tissue comprising administering to a patient a composition comprising at least one of resistin-like molecule  $\alpha$  (RELM $\alpha$ ), resistin-like molecule  $\beta$  (RELM $\beta$ ), a regulator of RELM $\alpha$  expression, or a regulator RELM $\beta$  expression in a pharmaceutically acceptable formulation and amount sufficient to down-regulate expression of at least one of RELM $\alpha$  or RELM $\beta$  to result in at least one of reduced acid secretion, reduced leukocyte accumulation, reduced mucus production, reduced cell proliferation, reduced collagen deposition, or reduced fibroblast accumulation for enhanced repair of the inflamed tissue.
27. The method of claim 27 wherein the regulator of RELM $\alpha$  or RELM $\beta$  expression is a Th2 cytokine.
28. The method of claim 27 wherein the regulator of RELM $\alpha$  or RELM $\beta$  expression is at least one of IL-4 or IL-13.
29. The method of claim 27 wherein the regulator of RELM $\alpha$  or RELM $\beta$  expression further comprises signal -transducer-and-activator-of-transcription (STAT6.)
30. The method of claim 30 wherein the regulator is at least one of a small molecule activator of STAT6, a STAT6 oligonucleotide, or an activator of STAT6 transcription.

31. The method of claim 27 wherein the inflamed tissue is at least one of airway, lung, trachea, bronchoalveolar lavage fluid, skin, eyes, throat, or nose.

32. The method of claim 27 wherein the patient is allergic or asthmatic.